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ABSTRACT

The invention disclosed herein relates to novel elastomeric Elastomeric polyisoprene articles and a water-based process for making such articles are disclosed. In particular, the articles are synthetic polyisoprene articles cured by an accelerator composition including a dithiocarbamate, a thiazole and a guanidine compound. The resultant article exhibits tensile strength properties similar to articles produced by solvent-based processes. The process provides for significantly reduced pre-cure process parameters (i.e., lower temperature and shorter time periods than conventionally used). In a preferred embodiment, the The accelerator composition includes zinc diethyldithiocarbamate (ZDEC), zinc 2-mercaptobenzothiazole (ZMBT) and diphenyl guanidine (DPG), in conjunction with a stabilizer, such as sodium caseinate. The invention encompasses elastomeric polyisoprene products made by the process, such as a surgeon's glove.